



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/533,644 | 05/03/2005 | Shoji Takahashi | 032213M038 | 6312 |

441 7590 08/31/2006
SMITH, GAMBRELL & RUSSELL
1850 M STREET, N.W., SUITE 800
WASHINGTON, DC 20036

EXAMINER

BLOUIN, MARK S

ART UNIT PAPER NUMBER

2627

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/533,644

Applicant(s)

TAKAHASHI ET AL.

Examiner

Mark Blouin

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/3/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Otani et al (US 6,341,115).

3. Regarding Claims 1,9, and 12, Otani et al (Figs. 9-24) a disc drive unit comprising: a case body (3) including a lower case body (4) having a case bottom face and an upper case body (5) having a case top face; the case body has a notch or opening formed in a position of the bottom face thereof which faces the functional members when the disc tray (6) is situated in the disc driving position; a disc tray capable of holding a disc and moving between a disc driving position where the disc tray is housed in the case body and a disc loading position where the disc tray projects from the case body; functional members (11 – spindle motor) provided on the disc tray; a pickup unit having an optical head (Fig. 15) for recording or reproducing information to or from the disc; a screw shaft (35) which engages the pickup unit and moves the pickup unit; and a lower cover (32) attached to the disc tray so as to be situated between the functional members and the case bottom face, in order to protect the functional members; wherein the pickup unit, the screw shaft, and the lower cover constitute a chassis unit, and the chassis unit is provided with a vibration-proof cushion (29) for absorbing vibration generated as the disc is driven, and the case

Art Unit: 2627

body has a notch or opening (3c) formed that position of the case bottom face which faces the functional members when the disc tray is situated in the disc driving position.

4. Regarding Claim 2, Otani et al (Figs. 9-24) the disc drive unit, wherein the lower cover has a notch or opening (3c) in that part thereof which faces the functional members.

5. Regarding Claim 3, Otani et al (Figs. 9-24) the disc drive unit, which comprises a pickup unit having an optical head (Fig. 15) for recording or reproducing information to or from the disc, and wherein one of the functional members is a thread motor (36) for sliding the pickup unit in the radial direction of the disc.

6. Regarding Claim 4, Otani et al (Figs. 9-24) the disc drive unit, wherein the thread motor (36) is situated in a position corresponding to the front edge portion of the lower case.

7. Regarding Claim 5, Otani et al (Figs. 9-24) the disc drive unit, wherein an output shaft of the thread motor (36) is situated in front of the case body and coupled to a screw shaft (35) for sliding the pickup unit (15) by a transmission-connection mechanism (37) composed of gears, and openings or notches are formed in those positions of the lower cover and the case body which face the transmission-connection mechanism (Fig. 14).

8. Regarding Claim 6, Otani et al (Figs. 9-24) the disc drive unit, wherein the thread motor (36) is a pulse motor coupled directly to a screw shaft (35) for sliding the pickup unit (15).

9. Regarding Claim 7, Otani et al (Figs. 9-24) the disc drive unit, which comprises a main circuit board (30) attached to the case body, a sub-circuit board attached to the disc tray, and a flexible connecting body (88) for electrically connecting the main circuit board and the sub-circuit board, and wherein the functional member is the flexible connecting body when the disc

tray is situated in the disc driving position and a bent portion thereof faces the notch or opening in the bottom face of the case body (Fig. 24).

10. Regarding Claim 8, Otani et al (Figs. 9-24) the disc drive unit, wherein the flexible connecting body (88) is a flexible printed circuit (FPC) or a flexible flat cable (FFC).

11. Regarding Claim 10, Otani et al (Figs. 9-24) the disc drive unit, wherein the functional member is a spindle motor (11) for driving the disc.

12. Regarding Claim 11, Otani et al (Figs. 9-24) the disc drive unit, wherein a protective tape (Col 14, line 61-62) is attached to the notch or opening in the bottom face of the case body.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Blouin whose telephone number is 571-272-7583. The examiner can normally be reached on M-F from 6:00 to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Blouin
Patent Examiner, Art Unit 2653, August 28, 2006

